1: Karsten--548-549 (1916-18) 1935 Jivaro-1
116, 802 (1928-29)

"The majority of the Jibaros are able to count to 'ten', but only for the five first numerals have they proper names. They always count with the fingers, beginning with those of the left hand, and then also with the toes.

The power of counting seems less developed among the Aguarunas; they have proper names only for the three first numerals: chikis, one, hima, two, and mayándi, three and also for five which, like other Jibaros, they denote by the word wéhe amúkei (literally: 'I have finished the hand').

Among the Upano tribes the numerals are as follows:

chikichi, one,
himera, two,
menéindu or kámbatamá, three,
einduk-einduk, four
wéhe amukei (=I have finished the hand'), five.

If the Jibaro Indian is obliged to count more than fine, [sic] he seizes the fingers of his right hand with those of the left; then, beginning with the thumb, he goes on counting, using the following expressions:

huini wéhe, six, (here I have a [finger from the other] hand)
himera wéhe, seven (two fingers [from the other hand])
menéindu wéhe, eight (three fingers)

einduk-einduk wéhe, nine (four fingers)
mai wéhe amúkahei, ten (='I have finished both hands').

If it is necessary to continue counting the Jibaro seizes the toes of one foot, one by one, and counts chikichi, himera, menéindu (one, two, three), etc. When he arrives at the fifth toe he says: huini náwi amúkahei, 'here I have finished one foot' (Huini = here, náwi = foot), it being understood that he has begun with the hands. The said phrase, therefore, is equal to 'fifteen'.

Thereupon he may continue counting with the toes of the other foot, and when he arrives at the last toe he says: mai náwi amúkahei, [549] 'I have finished both feet'; this means 'twenty'. Twenty is the absolute limit for the Jibaro counting, as far as it is expressed in words.

'Ten' may also be expressed by joining both hands closed, without using any particular expression, and if the Jibaro wants to indicate 'twenty', 'thirty', 'forty', etc., he does it by joining his closed hands two, three, four, etc. times.

It is characteristic of the Jibaro Indian that he cannot indicate a number in the abstract, but always does it by signs, even when he possesses a particular word for it, and nearly always he begins from 'one', counting on his fingers until he arrives at the number he wants to indicate. If, for instance, in regard to a feast which lasts for five days, a Jibaro is asked how many days the Indians celebrate it, he does not directly

answer 'five', but he starts to count on his finger beginning with 'one', mentioning what they do every day: 'The first day we do that and that, the second we do that and that, and so on, until he arrives at the fifth (little) finger, when he says: 'With this the feast is ended'. Similarly, if for instance six Jibaro Indians have left for a journey and one askes[sic]how many Indians went off, the answer will never be a direct 'six', but the Indian interrogated begins to enumerate the names of all those who went off, always counting on his fingers, until he arrives at the first finger on the right hand which means 'six'. This need of making numbers as concrete as possible in counting seems to me to illustrate that lack of power of abstraction which is characteristic of a primitive mind."

13: Rivet--252 (no date) 1908 Jívaro
116, 802

The Jíbaros do not have extensive learning. Father Plaza (1) says that they can count only up to 4, Raimondi up to 5 (2). Reiss (3) reports that in Macas the savages make use of their fingers to indicate numbers. The Aguarunas only have special numbers up to five and for the higher figures use their fingers and toes (4). The dialects of Macas, Gualaquiza and Zamora possess words for the first ten numbers; above 20, the Indians use the word irúnima which means "numerous". In places where they have come in contact with the Whites, they use the Quechua number systems above 10.

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1. Compte, op. cit., V. II, page 295.
2. Raimondi. On the Indian Tribes of the great District of Loreto, op. cit., page 39.
3. Reiss, op. cit., page 336.
4. G. M. von Hassel. Vocabulario aguaruna (Boletin de la Sociedad geografica de Lima, 12 year, V. XII, 1902, first quarter, page 83.)

25: Vigna--45 [3] (no date) 1945 Jivaro
116, 802

The arithmetic of the Jíbaros is poor. They count up to ten, because there are ten fingers. The word used for the numbers changes up to five; from six on they repeat the ordinatives with a suffix: "mey." When they wish to indicate the number twenty, they place the fingers of both hands near the feet (which are always bare). After the number twenty, all quantity is indicated with the word "Untzurí" (many).

/336 cont./ Masses

133 of water, created by the melting of glaciers after the outbreak of
[731] a new stream of lava, have reached the low country of Mácas
and caused terrible destruction. These districts are also not in-
[823] frequently plagued by earthquakes. Thus the Indian knows from
his own experience the far-reaching, fearful power of the
volcano, which he venerates with only shy reverence from a
distance.

I should like to remark here that it is not, as is some-
times maintained, the inner heat of the Sangay or the bottom-
less masses of ashes which prevent climbing; on the contrary,
the essential and sole difficulty lies in the magnificent glaciation
of the steep cone, which extends down to 4,300 meters above sea
level.

197 The language of the Jívaros is essentially different from
Quechua, so that the Indians of Riobamba could not make them-
selves understood. It sounds beautiful and has a certain masculine
• 802 seriousness. For counting, the five fingers of the hand are used
as a base, then one hand + 1, etc. To what extent higher num-
ber concepts are present I could not find out through my untrained
interpreters.

177 I should like to be permitted to add in conclusion a few
648 words about the future of these Indians and the possibility of
making our culture accessible to them -- Civilizatory attempts
were never undertaken by the Spanish or Hispano-American
parties; in all attempts of this type it was always only a matter
of the subjugation and exploitation of the Indians. The Jívaros
understand this well and therefore resist any intrusion in their
territory. The Ecuadorians can /337/ accomplish nothing by force.
If the Indians are left to themselves, however, they will, as I
have shown in the description of the warfare, gradually destroy
themselves. After what I have seen among the Jívaros, it does
not seem at all too difficult to me to fit this people into our
cultural development. Intelligent, ambitious, vain, and en-
dowed with a sense for clean, orderly housekeeping, it would be
easy to increase their needs by the gradual introduction of
European industrial products, to evoke the desire to acquire